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vessel, and to alter their lines so as to satisfy the conditions of stability and slow rolling to any required extent.

2. "Observations on 287 Thunder-storms made at Highfield House, near Nottingham, during the last nine years." By Edward Lowe, Esq., F.R.A.S. Communicated by John Lee, Esq., LL.D., F.R.S. &c.

The thunder-storms referred to in this communication are recorded in a tabular form, arranged according to their dates. In this table are given the date; the hour of the commencement of the storm; the mean height of the barometer to tenths of an inch; whether it is rising, stationary, or falling; the direction of the wind before the storm, during its continuance, and after its cessation; the maximum temperature on the day of the storm and on the day after; the minimum temperature on the night before and on the night after; and general remarks on the storms. This table is followed by remarks on particular storms recorded in it. In conclusion the author gives the results of his observations with reference to the number of storms in each year; the number in each month, with the hours at which they mostly occur in particular months; the number that have occurred with a rising, stationary, or falling barometer; the number in respect to the direction of the wind and of the current in which the storms moved; the number of storms that have occurred at the various heights of the maximum, and also of the minimum thermometer; the number in which the peculiar breeze that suddenly springs up on the commencement of thunder-storms has been well marked; the change in the direction of some of these storms, and indications of rotatory motion; and finally, the different atmospheric phenomena which have accompanied these storms.

3. "On a Dorsal dermal Spine of the *Hylæosaurus* recently discovered in the Strata of Tilgate Forest." By Gideon Algernon Mantell, Esq., LL.D., F.R.S. &c.

In the first discovered specimen of the remains of the fossil reptile named *Hylæosaurus* by the author, there were associated with the recognizable parts of the skeleton a series of thin, long angular processes, six or seven of which extended in a line nearly parallel with the upper part of the vertebral column: these bones are from four to seventeen inches in length. There are also several imbedded in various parts of the same block of stone; and in another specimen of this reptile, consisting of a considerable portion of the distal part of the vertebral column, similar angular bones are associated with the spine. The true nature of these processes, from their great size and osseous character, was deemed very problematical: Dr. Mantell, in his original memoir in 1832, regarded them as dorsal dermal spines that had formed a serrated crest which extended along the back of the *Hylæosaurus*, in the same manner as the horny dermal fringe in many species of *Iguana*, *Cyclura*, &c. Professor Owen, in his reports on British fossil reptiles, expressed his dissent from this opinion, and considered it more probable that the bones in question were abdominal ribs.